

**REMARKS**

Claims 7 and 14 have been amended to recite ammonium polyphosphate and at least one silica. These claims have also been amended to recite the transitional phrase “consisting essentially of.” Support for the amendments is found in the as-filed specification at at least paragraphs [0029], [0039], and [0072]. As known in the art (see accompanying Supplemental Information Disclosure Statement filed on even date herewith), Phos-Chek® includes ammonium polyphosphate and Hi-Sil® is a silica. No new matter has been added.

Claims 7, 8, 14, 15, and 20 are currently pending in the application. Claims 7, 8, 14, 15, and 20 stand rejected. Applicant has amended claims 7 and 14, canceled claims 8 and 15, added new claims 21-24, and respectfully requests reconsideration of the application as amended herein.

Support for new claims 21-24 is found in as-filed claim 1 and in the as-filed specification at at least paragraphs [0029], [0039], and [0072]. No new matter has been added.

As-filed claim 1 was withdrawn from consideration in the Office Action mailed November 15, 2005, and was inadvertently canceled by Applicant in the response filed January 16, 2006. While claim 1 was withdrawn as being directed to a nonelected invention, Applicant made the election with traverse, as explained in the response filed on August 31, 2005. Applicant respectfully submits that new claims 21 and 22 should be considered by the Examiner because these claims recite subject matter that is patentable and is already under consideration by the Examiner. New claims 21 and 22 recite patentable subject matter also set forth in claims 7 and 14. Therefore, Applicant submits that claims 21 and 22 are allowable. More specifically, claims 21 and 22 are directed to an insulation material, which is recited as part of claims 7 and 14. Since claims 7 and 14 recite the insulation material, the subject matter of claims 21 and 22 is currently under consideration by the Examiner. Further, the other elements of claim 7, in addition to the insulation material, comprise only a rocket motor case and propellant, the insulation material being disposed therebetween. As such, new claims 21 and 22 should be entered and should be rejoined with claims 7 and 14.

### 35 U.S.C. § 112 Claim Rejections

Claims 7, 8, 14, 15, and 20 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 8 and 15 have been canceled, rendering moot the rejection as to these claims. Applicant has amended claims 7 and 14 to recite “a curing agent” and respectfully requests that the rejection be withdrawn. Claim 20 is allowable as depending from claim 14.

### 35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 4,501,841 to Herring in view of U.S. Patent No. 4,726,987 to Trask *et al.*

Claims 7, 8, 14, 15, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,501,841 to Herring (“Herring ‘841”) in view of U.S. Patent No. 4,726,987 to Trask *et al.* (“Trask”). Claims 8 and 15 have been canceled, rendering moot the rejection as to these claims. Applicant respectfully traverses this rejection as to claims 7, 14, and 20, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for an obviousness rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The obviousness rejection of claims 7, 14, and 20 is improper because the cited references do not teach or suggest all of the claim limitations.

Herring '841 teaches an elastomeric lining material. Herring '841 at column 1, lines 11-14. The elastomeric lining material includes an elastomeric polymer, such as polychloroprene, chlorosulfonated polyethylene, polyurethane, and ethylene propylene diene monomer ("EPDM"). *Id.* at column 3, lines 22-28. The elastomeric lining material also includes char-forming organic fibers and inorganic particulates. *Id.* at column 2, lines 38-41 and column 3, lines 62-68. The char-forming organic fibers are polyaramide pulp fibers. *Id.* The inorganic particulates include hydrated silica, mica, or quartz. *Id.* To improve flame retardance, the elastomeric lining material also includes chlorinated organic compounds in combination with antimony oxide or hydrated alumina. *Id.* at column 4, lines 3-14.

Trask teaches a fire retardant textile panel. Trask in the Abstract. The textile panel has five layers and includes a core material having a mixture of two or more staple fibers, such as polyamide fibers, polyimide fibers, poly(imideamide) fibers, aramide fibers, polyolefin fibers, polyester fibers, cellulosic fibers, sulfars, glass fibers, carbon fibers, or polyether-ether ketone fibers. *Id.* at column 4, lines 48-53 and column 7, lines 6-12. The core material is sandwiched by four other layers, each of which includes a mixture of two or more of the above-mentioned staple fibers. *Id.* at column 4, line 66 through column 5, line 37. A skin, such as a polyvinylchloride ("PVC") material, is attached to a top surface of the five layers. *Id.* at column 5, lines 38-39.

Herring '841 and Trask, when combined, do not teach or suggest all of the limitations of independent claim 7 because the cited references do not teach or suggest the limitation of "the insulation material consisting essentially of a low-density ethylene propylene diene monomer polymer, ammonium polyphosphate, at least one silica, a curing agent, an organic filler selected from the group consisting of polyvinyl chloride, polyphenylene sulfide, melamine, and a homopolymer of vinylidene chloride, and at least one additive selected from the group consisting of at least one antioxidant, at least one cure accelerator, at least one cure activator, at least one tackifier, and at least one plasticizer."

Instead, the elastomeric lining material of Herring '841 includes EPDM, polyaramide pulp fibers, inorganic particulates, and chlorinated organic compounds in combination with antimony oxide or hydrated alumina. Since Herring '841 does not teach or suggest the organic

fillers recited in claim 7, as acknowledged by the Examiner, Herring '841 necessarily does not teach or suggest all of the limitations of claim 7. In addition, since the elastomeric lining material of Herring '841 includes the inorganic particulates and the chlorinated organic compounds in combination with antimony oxide or hydrated alumina, Herring '841 does not teach or suggest a material that "consists essentially of" the components recited in claim 7. Trask also does not teach or suggest the above-mentioned limitation because the textile panel of Trask is formed from staple fibers and a vinyl skin. As such, Trask also does not teach or suggest a material that "consists essentially of" the components recited in claim 7. Furthermore, Herring '841 and Trask, when combined, do not teach or suggest ammonium polyphosphate, as recited in claim 7.

Since the cited references do not teach or suggest all of the limitations of claim 7, the obviousness rejection of claim 7 is improper and should be withdrawn.

New claim 23 is allowable, *inter alia*, as depending from allowable claim 7.

Since independent claim 14 recites substantially the same limitation as claim 7, claim 14 is allowable for substantially the same reasons as claim 7. Claim 20 is allowable, *inter alia*, as depending from allowable claim 14. New claim 24 is allowable, *inter alia*, as depending from allowable claim 14.

Since new independent claim 21 recites substantially the same limitation as claims 7 and 14, new claim 21 is allowable for substantially the same reasons described above. New claim 22 is allowable, *inter alia*, as depending from allowable claim 21.

Obviousness Rejection Based on Herring '841 in view of Trask and further in view of United States Patent No. 4,878,431 to Herring

Claims 7, 8, 14, 15, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Herring '841 in view of Trask and further in view of U.S. Patent No. 4,878,431 to Herring ("Herring '431"). Claims 8 and 15 have been canceled, rendering moot the rejection as to these claims. Applicant respectfully traverses this rejection as to the remaining claims, as hereinafter set forth.

The teachings of Herring '841 and Trask are as previously described.

Herring '431 teaches an elastomeric lining material. Herring '431 at column 1, lines 11-14. The elastomeric lining material includes an elastomeric polymer, such as polychloroprene, chlorosulfonated polyethylene, polyurethane, or EPDM, and polyisoprene. *Id.* at column 2, lines 36-44. The elastomeric lining material also includes char-forming organic fibers and organic or inorganic particulates. *Id.* at column 2, lines 27-35. The char-forming organic fibers are polyaramide pulp fibers. *Id.* The inorganic particulates include hydrated silica, mica, quartz, or chlorinated hydrocarbon compounds. *Id.* at column 4, lines 34-40. To improve flame retardance, the elastomeric lining material also includes chlorinated organic compounds in combination with antimony oxide or hydrated alumina. *Id.* at column 4, lines 41-46. The elastomeric lining material also includes tackifiers, lubricants, or plasticizers. *Id.* at column 5, lines 50-52.

The obviousness rejection of claims 7, 14, and 20 is improper because the cited references, when combined, do not teach or suggest all of the limitations of these claims. Specifically, the cited references do not teach or suggest the limitation of "the insulation material consisting essentially of a low-density ethylene propylene diene monomer polymer, ammonium polyphosphate, at least one silica, a curing agent, an organic filler selected from the group consisting of polyvinyl chloride, polyphenylene sulfide, melamine, and a homopolymer of vinylidene chloride, and at least one additive selected from the group consisting of at least one antioxidant, at least one cure accelerator, at least one cure activator, at least one tackifier, and at least one plasticizer," as recited in each of independent claims 7 and 14. Neither Herring '841 nor Trask teaches or suggests this limitation for the reasons previously described. Herring '431 also does not teach or suggest this limitation and, therefore, does not cure the above-mentioned deficiencies in Herring '841 and Trask.

Since the cited references do not teach or suggest all of the limitations of claims 7 and 14, the obviousness rejection of these claims is improper and should be withdrawn.

Claim 20 is allowable, *inter alia*, as depending from allowable claim 14. New claims 23 and 24 are allowable, *inter alia*, as depending from allowable claims 7 and 14, respectively.

Since new independent claim 21 recites substantially the same limitation as each of claims 7 and 14, new claim 21 is allowable for substantially the same reasons as claims 7 and 14. New claim 22 is allowable, *inter alia*, as depending from allowable claim 21.

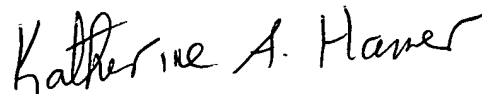
**ENTRY OF AMENDMENTS**

The amendments to claims 7 and 14 and new claims 21-24 should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add new matter to the application.

**CONCLUSION**

Claims 7, 14, and 20-24 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, she is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink that reads "Katherine A. Hamer". The signature is written in a cursive, flowing style.

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